



INTEGRATING EMPLOYEE HEALTH

A
MODEL
PROGRAM
FOR
NASA

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

A report from the

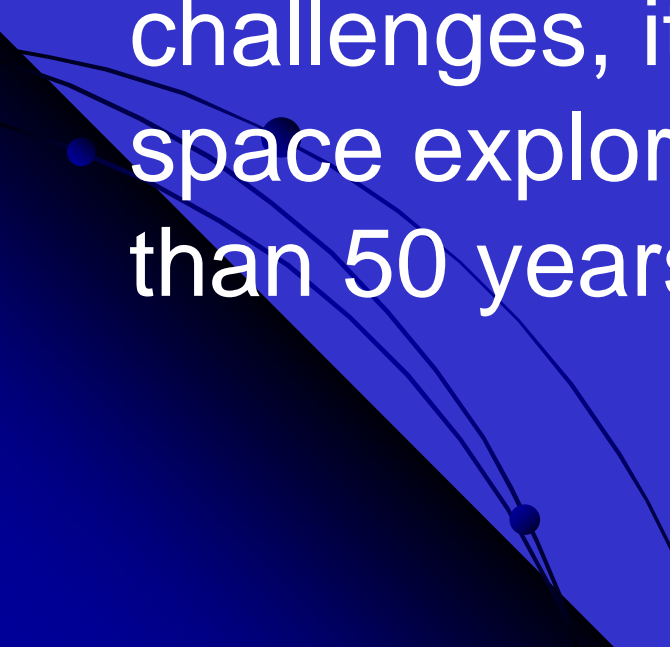
Committee to Assess
Worksite Preventive
Health Program
Needs of NASA
Employees

The National Academies
Institute of Medicine
Food and Nutrition Board

The Charge to the Committee to Assess Worksite Preventive Health Needs of NASA Employees

- Review existing preventive health programs
- Assess employee awareness of and attitudes toward health programs
- Determine any special risks unique to the NASA environment
- Evaluate and recommend options for future preventive health programs, including:
 - Ways to encourage employee participation
 - Ways to create a healthier workplace environment
 - Ways to evaluate effectiveness of programs

The National Aeronautics and Space Administration employs a highly skilled workforce accustomed to working under high pressure, short deadlines, and limited budgets, and despite these challenges, it has turned the vision of space exploration into a reality in fewer than 50 years.



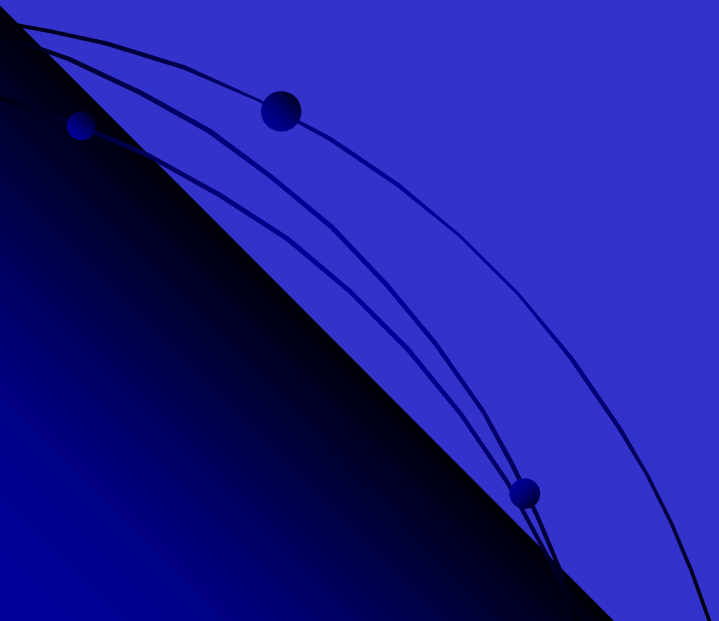
NASA's cultural tradition of believing that its workers can overcome complex technical challenges is reflected in its stated core values:

- Safety
 - People
 - Excellence
 - Integrity
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- A decorative graphic in the bottom-left corner of the slide. It features several curved, overlapping lines in shades of blue and black, suggesting orbital paths or trajectories. Small blue dots are placed at various points along these curves.

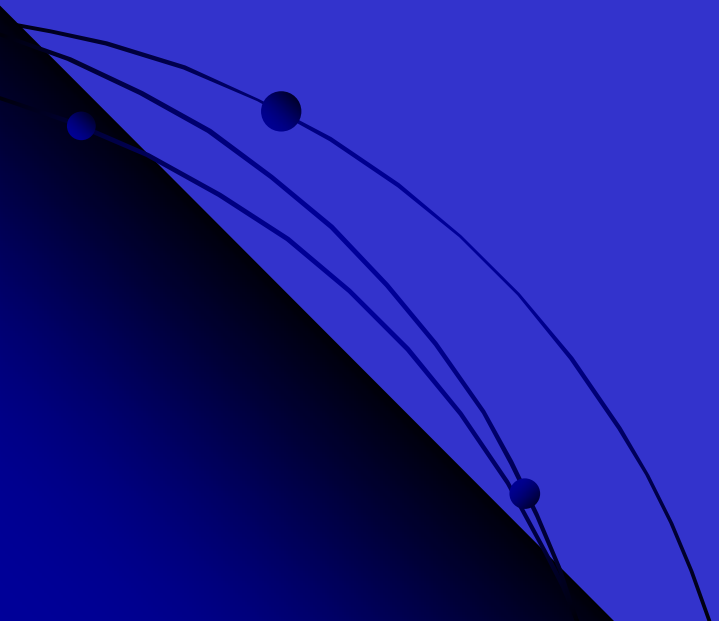
NASA has been a leader in preventive health and benchmarking efforts in occupational health programs.

- First federal agency to achieve the Occupational Safety and Health Administration VPP Star Status
 - Five Centers (ARC, JSC, KSC, LRC, WSTF) have VPP Star Certification
- One of the world-class programs benchmarked by APQC in 1999
- Centralized health advocacy was recommended for health programs and policies in 1994/95
- Occupational Health Website provides employees with information on programs, a single point of access to all programs, and a large inventory of resources and tools

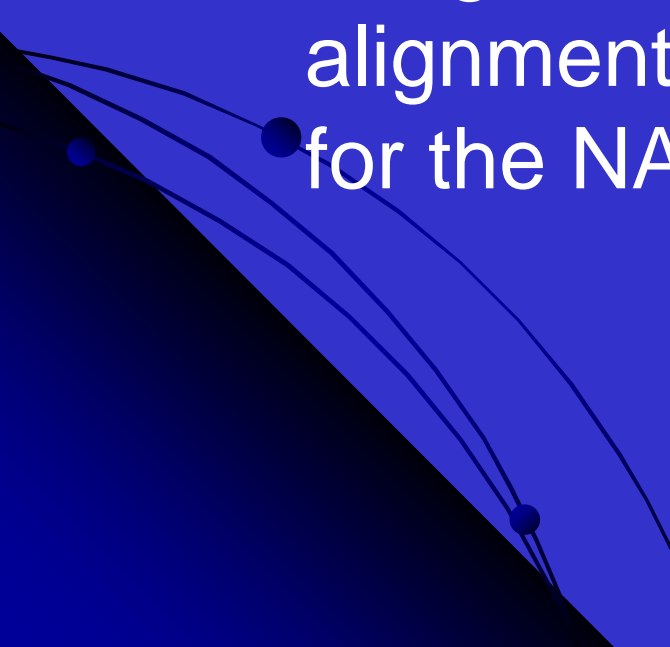
NASA has produced many successful leading edge programs, largely as the result of a highly motivated and resourceful workforce that embraces challenges.



However, the very same cultural traits and organizational practices that have fostered mission success can also affect employee well-being.



Primary Findings

1. The occupational health mission statement is designed and directed to meet the health needs of NASA employees; however, there is a need to bring this mission statement into alignment with a mission-driven vision for the NASA organization.
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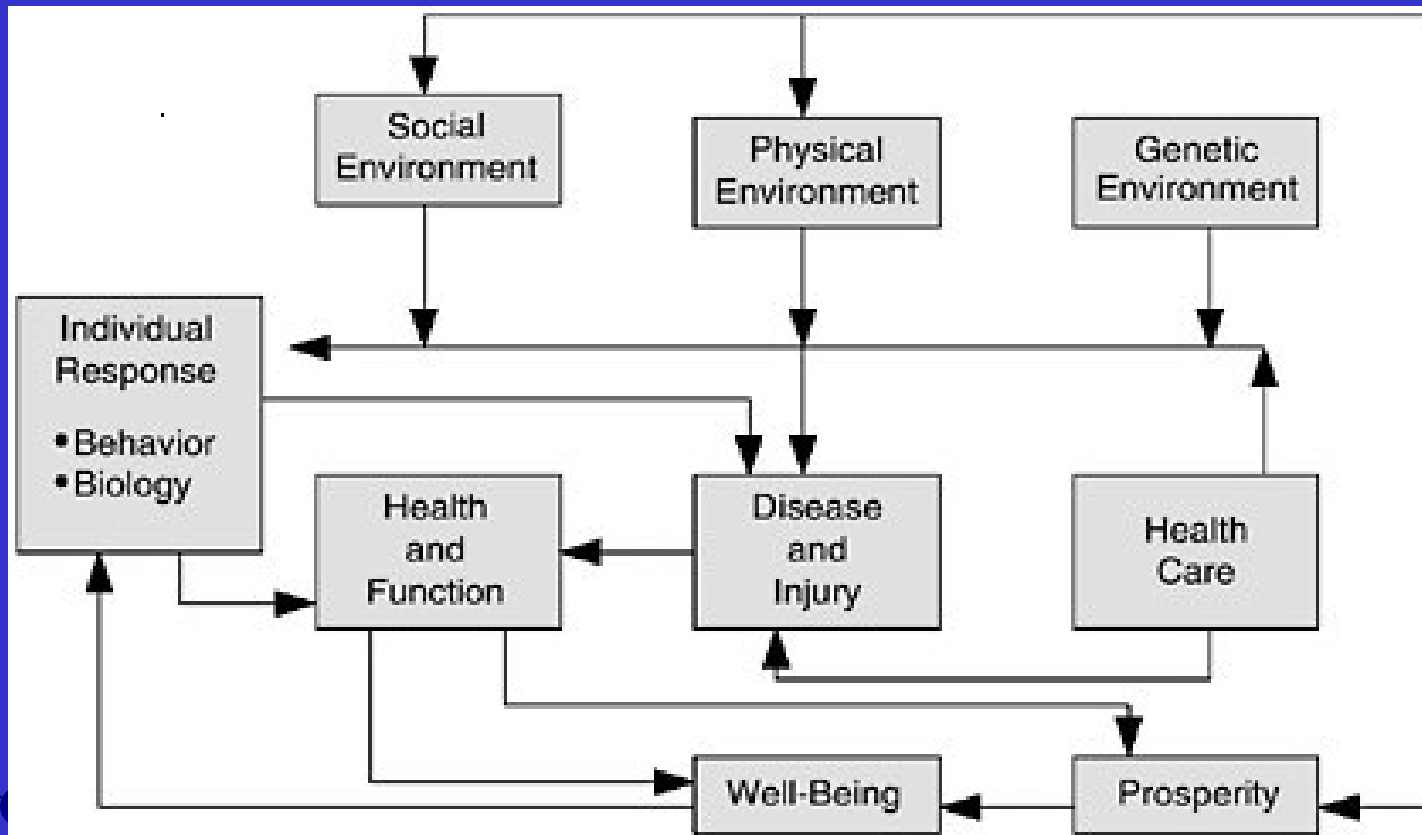
2. NASA is similar to most organizations which follow a traditional model for providing health care to employees.

Focus is on:

- Disease rather than health status
- Treatment rather than preventive care
- Individual rather than population-based health model
- Single rather than multiple-risk interventions
- Segregated rather than integrated management systems

3. The needs of the modern knowledge-based workforce in a high-performance organization require an approach beyond those traditionally used in occupational health



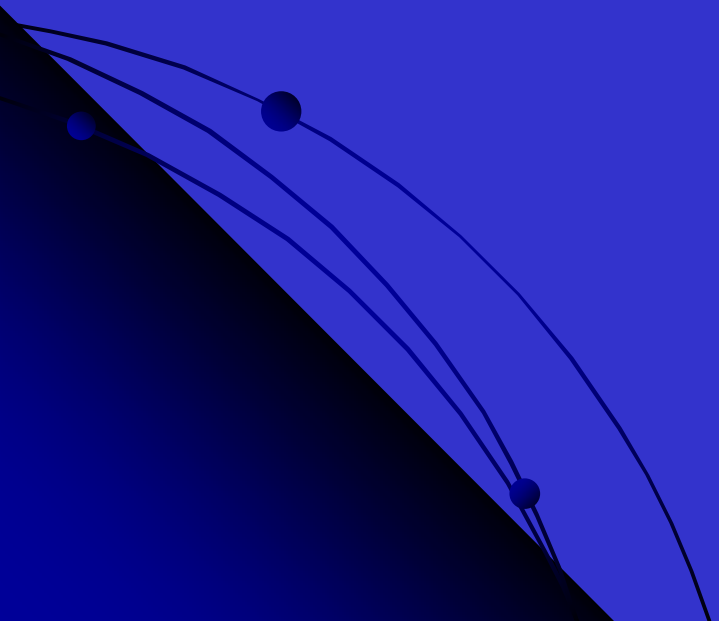


Determinants of Health; Evans and Stoddart Model.

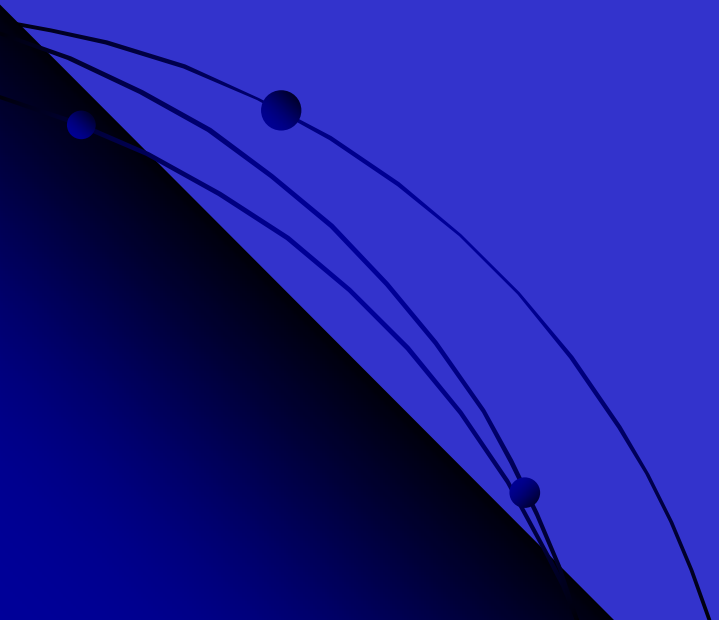
SOURCE: IOM, 2003b

Adapted from Evans and Stoddart, 1994

4. There is a need for more effective, coordinated, and data-driven health program policy development to support NASA's mission and goals.



The Case for Change



Characteristics of a Healthy Workforce


- **HEALTHY**- demonstrating optimal health status as defined by positive health behaviors; minimal modifiable risk factors; and minimal illnesses, diseases, and injuries;
- **PRODUCTIVE** - functioning to produce the maximum contribution to achievement of personal goals and the organizational mission;
- **READY** - possessing an ability to respond to changing demands given the increasing pace and unpredictable nature of work; and,
- **RESILIENT** - adjusting to setbacks, increased demands, or unusual challenges by bouncing back to optimal “well-being” and performance without incurring severe functional decrement.

Current Trends in America for a Healthy and Productive Workforce

| Perspective | Current State | Desired State |
|---------------------------|---|---|
| Function | Absenteeism | Performance |
| Cost Metrics | Medical Costs | Economic Outcomes |
| Care Model | Treatment Focused | Prevention & Behavior Change-Focused |
| Medical Model | Individual | Population |
| Health Metrics | Disease Status | Health Status |
| Interventions | Single-Risk Focused | Multiple-Risk Focused |
| Health Framework | Employer, Condition, and Program Centric | Employee Centric |
| Management Systems | Segregated Programs | Integrated Systems |

Recommendation 1: *A New Vision*

The Committee recommends that the administrator of NASA adopt a new vision for worker health, readiness, and resilience that directly links to NASA's mission and includes health as a core NASA value that is implemented through an integrated health and systems approach.



Achieving a New Vision

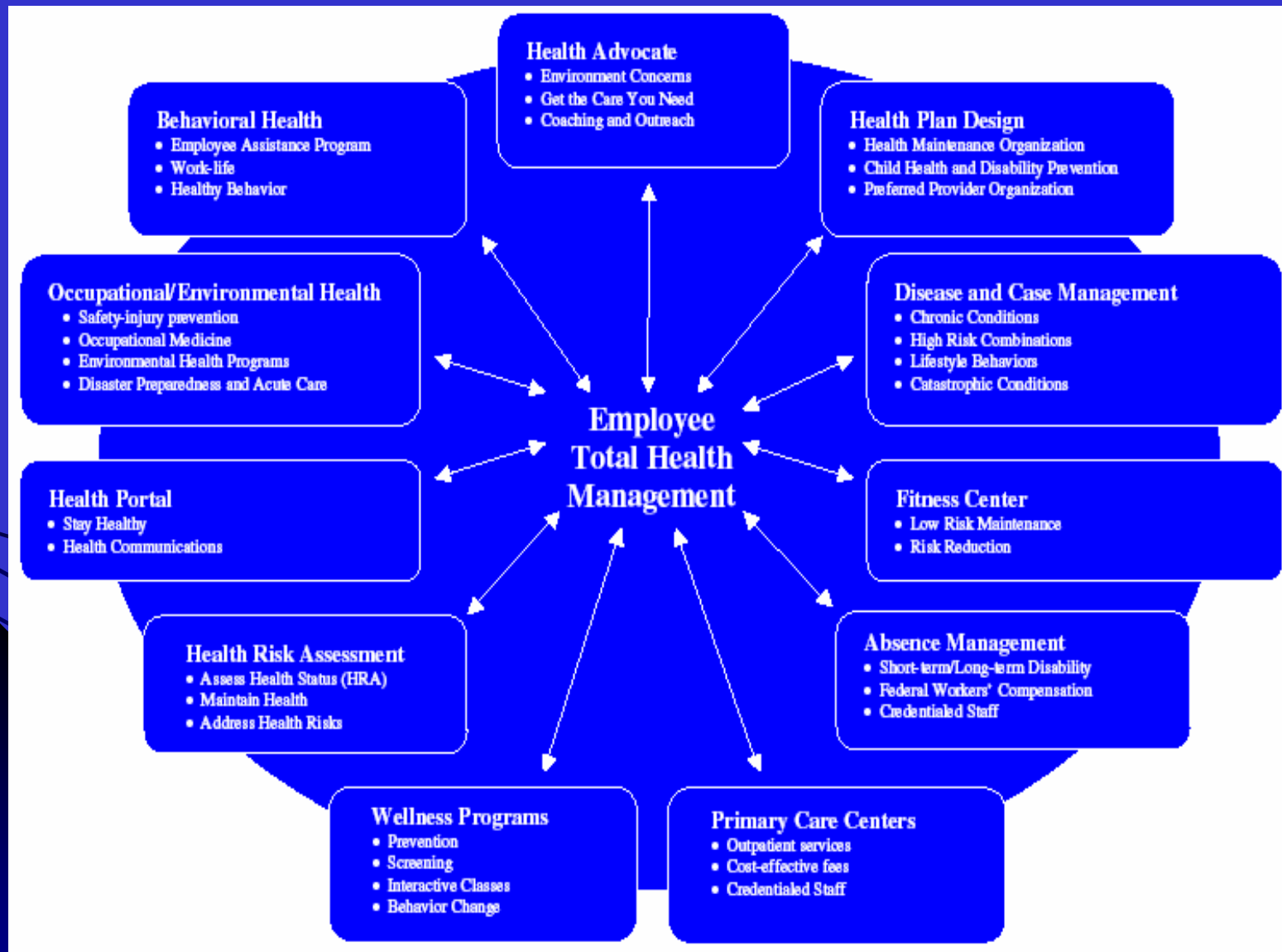
The success and sustainability of an integrated health process must first and foremost begin with a clear understanding of the organization's mission.



A mission-driven vision for health should articulate why investment in health and employee-integrated health helps NASA achieve its core mission on time, under budget, and better than expected.

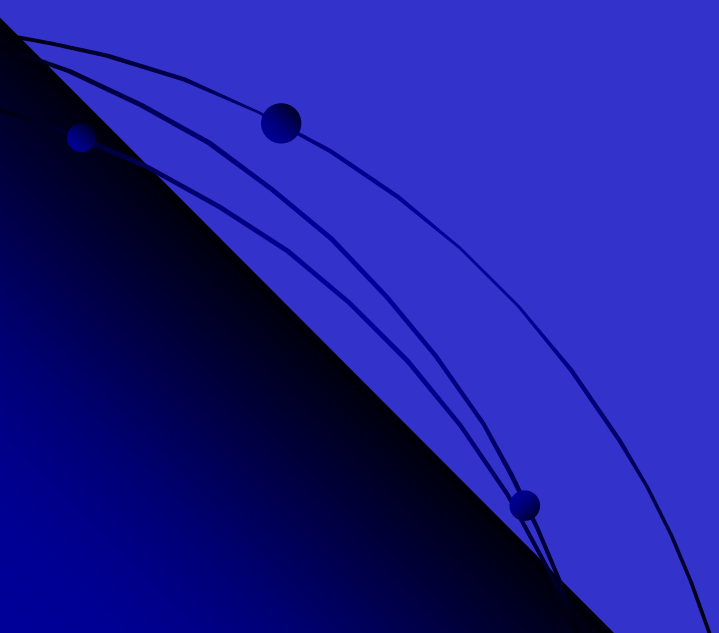



An Integrated and Sustainable Approach for Total Health Management



Recommendation 2: *NASA's Health Vision*

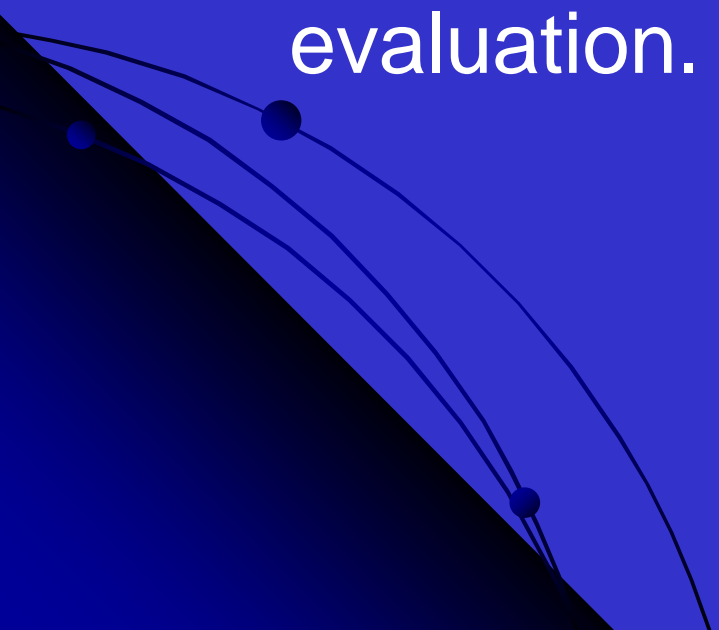
To achieve an integrated health program, grounded in a management systems approach to health and safety, NASA should:



1. Recast its employee health vision to improve linkage and support for NASA's core mission and goals;
 2. Integrate workplace safety with the occupational health function;
 3. Establish specific interfaces or linkages between health benefits design and administration in Human Resources and Occupational Health for analytic, intervention, and outcome assessment purposes; and
 4. Adopt a management systems approach to actualize, sustain, and improve NASA's commitment and performance in employee health, safety, and well-being.
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Recommendation 3: *Consolidation and Consistency*


To the extent possible, NASA Headquarters should encourage consistency between core occupational health programs, health data collection, impact assessment, and program evaluation.



Recommendation 4: *Program Integration*

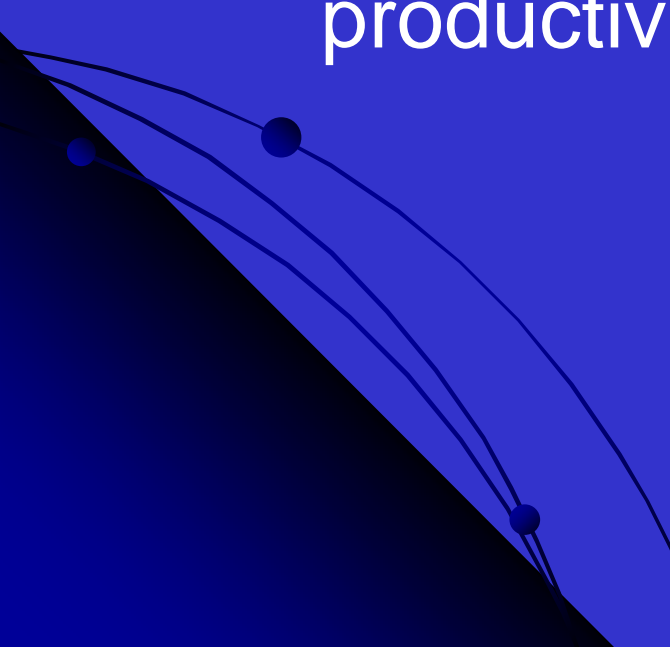
To achieve the integration required, NASA should incorporate those components of an integrated system most appropriate to its organizational needs, including:



- Develop a data-based approach to policy, planning, programming, budgeting, implementation, operations, evaluation, and management.
 - Create a standardized “health and performance” full-cost accounting framework to define, standardize, prioritize, fund, and evaluate resource allocation for human-related mission performance and workplace safety, health, and productivity.
 - Incorporate mission-essential elements of integrated health programs in contracting requirements.
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Recommendation 5: *Manager Education*

NASA should provide education and training to first-line managers and supervisors that focuses on the relationship between health and productivity.



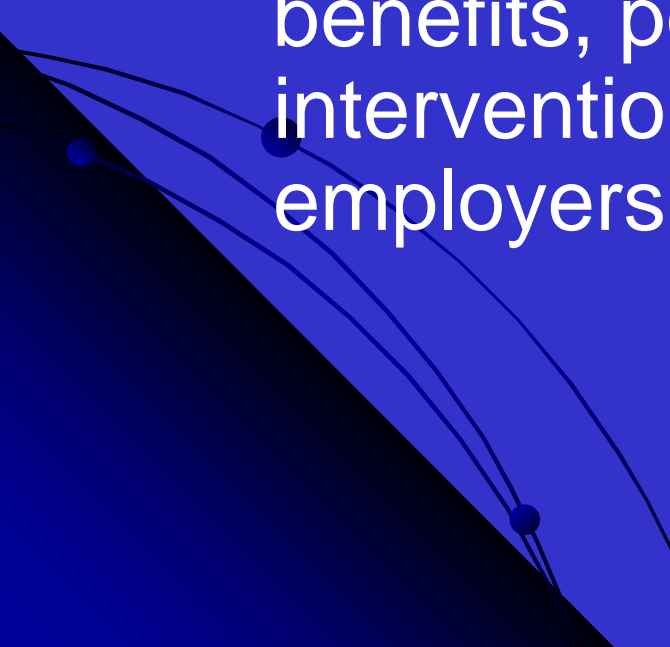
Understanding Integrated Health Programs

An integrated approach to improving employee health involves going beyond traditional medical or occupational health to include a variety of fitness and wellness programs as integral components to a comprehensive well-being approach.




Recommendation 6: *Health Care Cost and Utilization Data*

NASA should obtain health care cost and utilization data for its civil service employees enrolled in the FEHBP to inform, target, and optimize agency benefits, policies, and workplace interventions as private-sector employers do.



Recommendation 7: *Health Risk Appraisal*

A basic health appraisal tool such as a health risk appraisal (HRA) should be selected from those available in the marketplace and offered to all NASA workers.



Recommendation 8: *Integrated Health Policies and Programs*

NASA should offer coordinated and integrated individual- and environmental-level health promotion policies and programs that promote worker health across content areas including diet, exercise, job stress, and control or worksite hazardous exposures to meet the health needs of a diverse workforce.

Recommendation 9: *Periodic Health Examinations*

NASA should reexamine the allocation of resources at the center level for periodic health examinations, in consideration of an integrated risk factor reduction program, and evaluate the data requirements, periodicity, and effectiveness of existing occupationally related medical screening examinations.

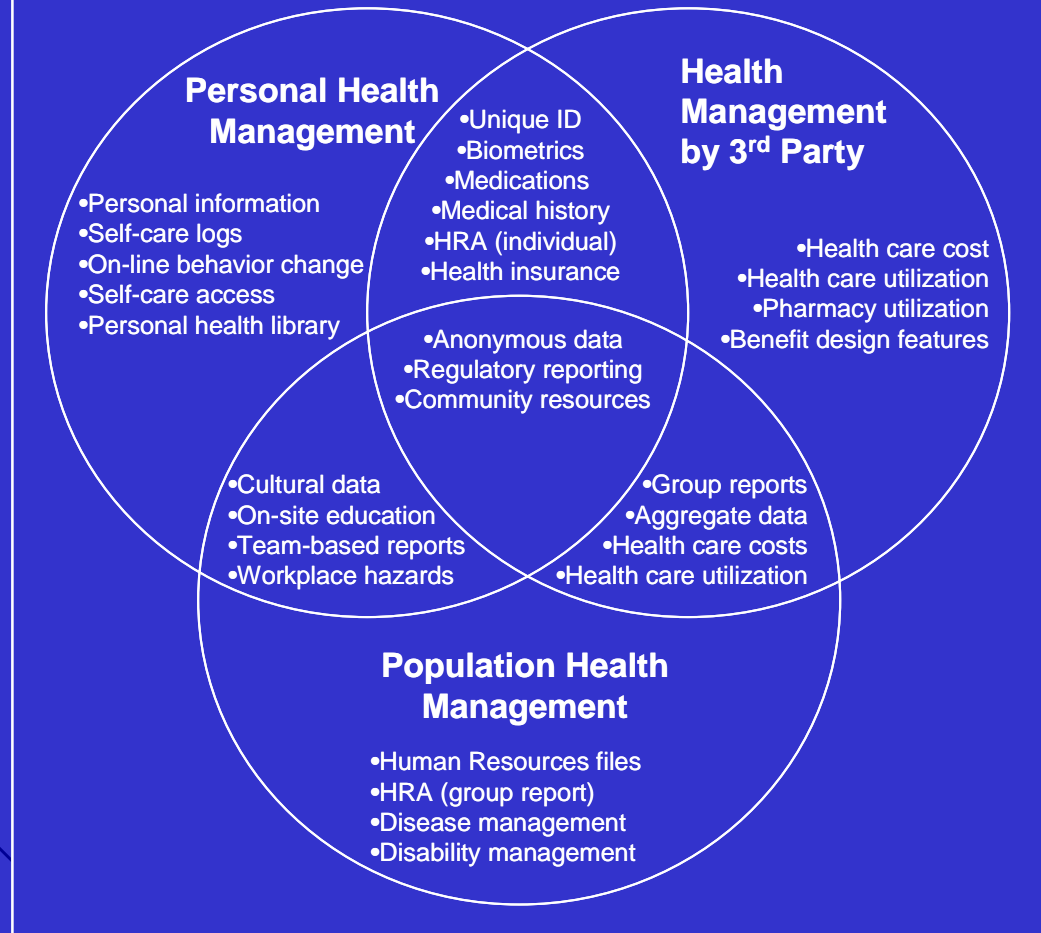
Recommendation 10: *Program-Specific Evaluations*

NASA should conduct program-specific evaluations to ensure the effectiveness and appropriate use of available resources.



Worksite Health Promotion and e-Health Technology

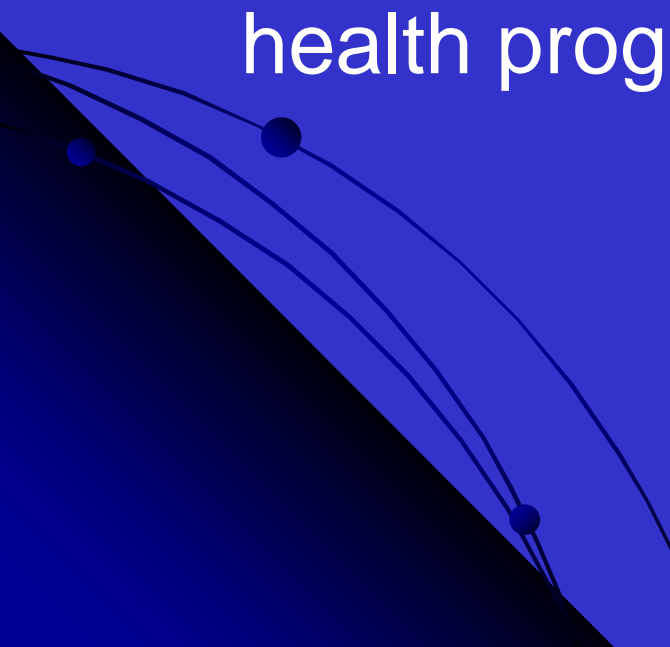
Interaction of Personal and Group Information Factors



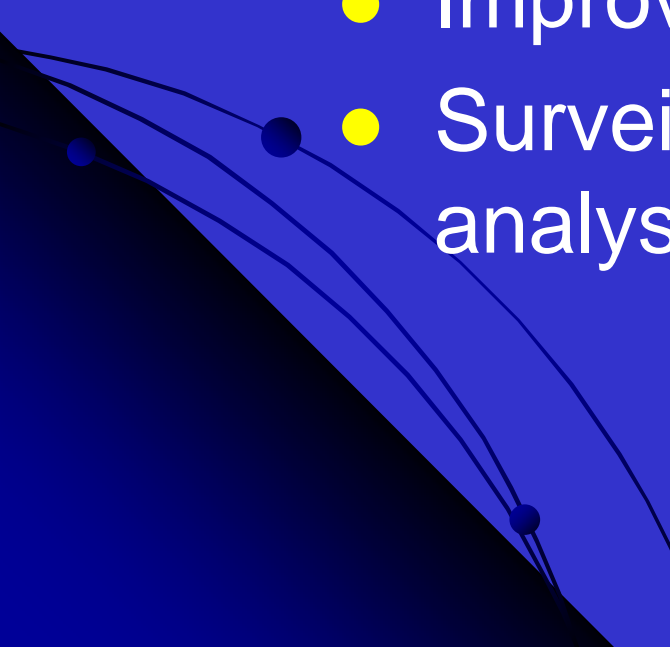
Interaction of Personal and Group Information Factors
Source: ACSM

Data Integration and Management for Better Health

Data management is a key concept in the successful implementation, conduct, and measurement of any occupational health program.




An effective data management and measurement system can support organizational objectives such as:

- Decision making
 - Accountability
 - Improvement; and
 - Surveillance and longitudinal analyses and knowledge discovery.
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Recommendation 11: *Data Management*

NASA should implement a systems-based approach to data management that includes:

- Data collection, management, and reporting according to agreed-on protocols and standards;
 - Consistent data practices across all NASA centers; and
 - Longitudinal tracking of data across all centers and the agency as a whole.
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Recommendation 12: *Data Access*

NASA should adopt a framework for measurement that will allow the agency direct access to data collected for the purposes of decision making, accountability, improvement, surveillance, longitudinal analyses, and knowledge discovery.



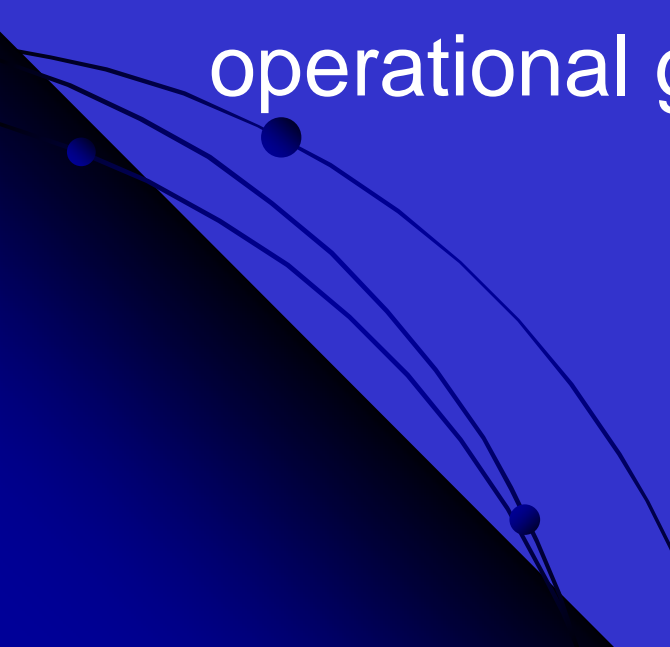
Recommendation 13: *Intra-agency Collaboration*

NASA should create and initiate a data-management collaborative that includes representatives from all centers as well as Headquarters who are trained and well-informed about measurement and evaluation.




Recommendation 14: *Data Architecture and Technology*

NASA should establish agency-wide data architecture and technology, that may or may not include a comprehensive electronic medical record, to support its operational goals.




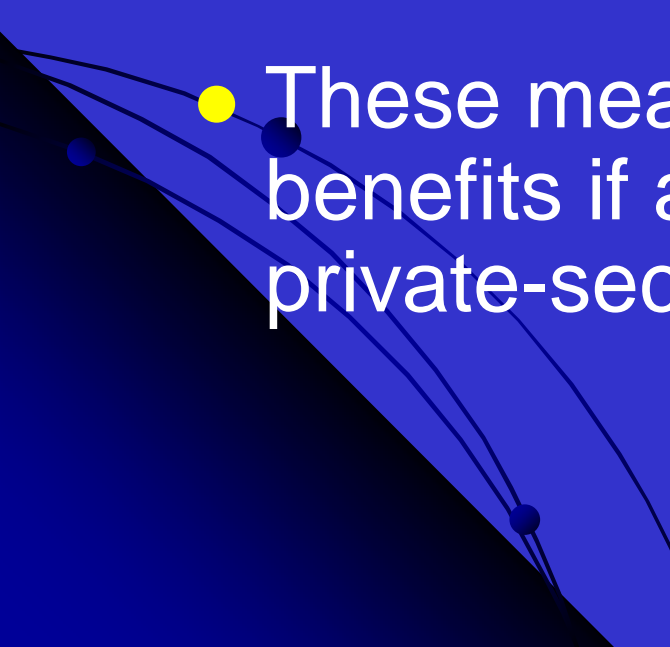
Recommendation 15: *Research Opportunities*

NASA should use the opportunity of building these new programmatic endeavors to contribute to knowledge about program effectiveness, cost benefits arising from these programs, and factors that can contribute to the success of these programs.

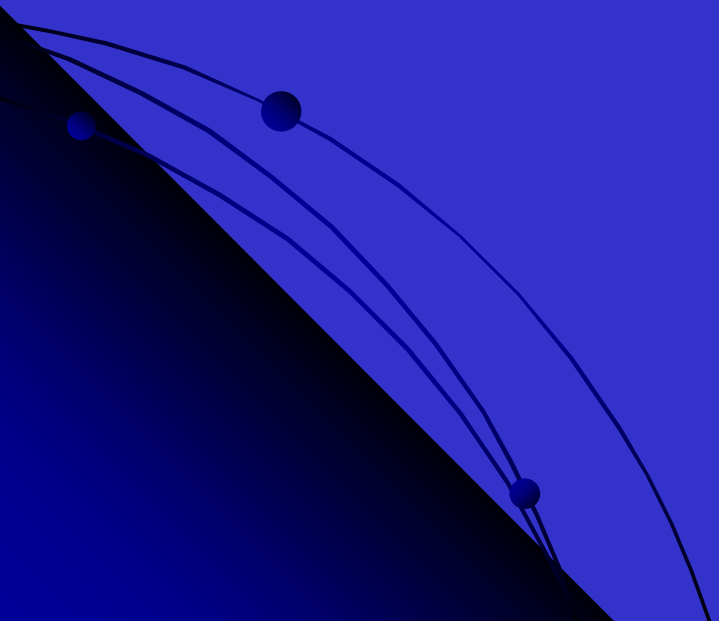


Conclusions

- Well-being programs can reach large numbers of employees, enhance occupational health, and encourage adoption of healthy behaviors.
 - Adoption of an integrated approach to health and well-being programs can reduce health care costs.
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- Implementation and ongoing evaluation of effective programs at all NASA worksites may provide significant improvements in employee well-being and assist in the development of a healthier and more productive workforce.
 - These measures may confer similar benefits if adopted by other public- and private-sector organizations.
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- Opportunities exist at NASA for further research that will help inform future program and policy development



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